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ABSTRACT

The title question is discussed in six sections. Structural variables and issues are discussed in subsections concerning: the sex of child, the kindergarten program's day length, type, entrance age, group size, classroom aides and arrangements, and policies on promotion, failure, and retention. Interpersonal variables are explored in terms of whole language, the process of learning to read through experience, early writing, metacognitive skills, and theories of child development. Ideal kindergarten teachers' characteristics are considered in subsections on: identifying students' abilities, respecting personhood, modeling calmness and coping, providing developmentally appropriate learning experiences, becoming skilled at science and mathematics, enriching language, using fair rules, cultivating flexibility and attunement, providing psychological safety, providing many books, engaging in turntaking conversations, self-esteem, teaching children to identify consequences of behaviors, developing a repertoire of disciplinary techniques, boosting nutrition, and relieving stress on students. Decisions about assessment are discussed with regard to kindergarten screening, assessment of developmental appropriateness, and monitoring of children's progress. Changes in teacher education and school practices are described in discussions of outreach to parents and the community. Discussion of kinds of learning needed in kindergarten centers on motivation, reasoning, thinking skills, and teacher beliefs and the implementation of changes. A total of 167 references are cited. (RH)

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How Can We Make Kindergarten More Effective For Children

Alice Sterling Honig, Ph.D.
Professor of Child Development
Syracuse University

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How Can We Make Kindergarten More Effective For Children

In any inquiry with a focus toward improved provision of services and improved quality of professional training, it is important to identify relevant variables involved in decision making. Thus, the process for optimizing kindergarten experiences and outcomes for young children must ask: What are the variables that must be addressed? Then, examination of philosophical values, goals, and research in educational and child development ,as well as analysis of change process mechanisms in teacher training, can be undertaken. All factors can subsequently be appraised in conjunction with consideration of political and societal factors that support or vitiate movements toward optimizing the learning environments, processes, and interactions for kindergarten children.

A great many honest and in-depth efforts have been made in school districts across the United States in order to elucidate kindergarten classroom processes, teacher interactions, child responses to program, and outcome measures associated with particular programmatic implementations. Reports of such efforts can be found in the Bibliography that is appended to this document.

Let us examine critical variables that have been specified in such reports. We will also look at the philosophical and developmental concerns of those professionals (see, for example, Hollifield et al., 1989; Karweit, 1987a; 1987b; 1987c; Katz et al, 1987; Mindes, 1990; Mouw, 1976; Pigge, 1979; Schultz, 1981; Spodek, 1985; 1989) who have closely examined school systems with regard to their current practices, their transitions to new practices, and in full transformation to developmentally appropriate programs for young children. What has been learned? From ongoing studies and observations, what are the ideas, techniques and difficulties, hopes and promises that can inform efforts to improve kindergarten experiences and outcomes for children in North Carolina?

A listing of some of the issues and questions that have been frequently raised by principals, superintendents and citizen's groups studying kindergartens nationally gives a clearer picture of the body of common concerns that have motivated some of the best of these studies. They have included observations, interviews and fact-gathering techniques, in an attempt to answer questions about where the program has come from, where it is now and where it is or should it be going (with appreciation to Gauguin, the title of whose beautiful painting suggests such procedures). Variables and questions to be addressed may be grouped under several major rubrics. The first category has to do with _structural_ issues that can be changed by mandate, or that require legislative, political and economic resources in order to implement. That is not to say that structural issues may not be intimately intertwined with _curricular practices_, _personalities of teachers_, and _quality of school staff_. Certainly, whether a district permits 20 or so pupils per teacher rather than 32 is not only a structural issue but may have profound implications for teacher stress and burnout, for possibilities if not probabilities of provision of increased individualized attention to children. The same would go for decisions as to whether or not there should be an aide in every kindergarten classroom. Yet, such decisions do require legal and economic resources for allocation in a way that other changes may not (e.g. changes in teaching style, in principal's support for classroom learning centers, and for more power and autonomy for the teachers rather than for the system in decision making for the classroom).

Structural Variables and Questions

Length of Kindergarten Day

How long shall the kindergarten day be? Half day? Or full day? Or shall both options be provided? Shall full-day kindergartens, if established, be *mandated* for all eligible children? Shall they be *available* to children with particular need for more preparation time for school success?

As Gullo (1990) has pointed out, in an all-day kindergarten the teacher has about 25 children daily, far fewer than the number served when two half-day shifts are the rule. Thus, the teacher can get to know each child personally more easily, and more accurately be able to identify the learning needs of each child. However, for some children, being confined to classroom and schoolyard all day at this age will require too difficult an adjustment. For others, with full-time employed parent or parents, the stress will be far less if the same safe, wellknown environment is available for a full school day, compared with change to another child care situation after a half-day program.

> The all-day kindergarten program, if implemented appropriately, allows the teacher to accommodate individual differences by expanding the curriculum horizontally. This means giving children diverse experiences that are integrated across the various curricular areas, as opposed to adding advanced content to fill the increased hours in the schedule. Horizontal expansion implies that children have more opportunities to "cultivate" what they have experienced in a variety of ways and in a variety of settings. The all-day schedule allows for more discussion, application, and participatory activities in all curricular areas. The teacher is less pressured to "complete" the curriculum by a certain date, hence children experience less pressure to "perform". (p.37)

Research by Gullo, Bersani, Clements, & Bayless (1986) suggests that an all-day experience is not detrimental to five-year olds, but possibly a benefit. Subjects for another study (Gullo & Clements,1986) were a 1981-82 kindergarten class who participated in an every-day, half-day schedule (K1) and the entire 1982-83 kindergarten class who participated in an all-day, alternate day schedule. Analyses of covariance (to control for pretest cognitive level of the two groups) revealed no significant differences between K1 and K2 on a norm-referenced test designed to assess several important skills required for first grade reading and math. The assessment included several components: auditory-beginning consonants and sound-letter correspondence; visual matching and finding patterns; school language and listening; and prereading skills as indexed by a combined score of the above items. Thus, it appeared that the children performed equally well cognitively, whether attending kindergarten on an every-day, half-day basis or an alternative all-day, alternate-day schedule. No difference in attendance patterns was found. However, alternate day models may prove more stressful for full-time employed parents who are forced to make changing arrangements for child care depending on the day of the week. Emotionally, on two of the scales used, K2 children rated higher on originality/independent learning and on being critical and competitive. Other research also suggests that the benefits of all day kindergarten may be social-emotional (Peck, McCaig, & Sapp,1988).

Earlier studies (Cleminshaw & Guidubaldi, 1979; Gornowich et al., 1974) showed significant differences in achievement in favor of all-day models. But they may have been flawed in design in that the curricula of the different models may have differed. Data comparing kindergarten length of day and scheduling must control for cognitive level of the children assigned to each model at entry to program as well as the content and process of the curriculum carried out. Stinnard (1982) reviewed ten research studies that compared half-day and full-day kindergarten. Academic advantage was claimed one year later for children who had participated in full-day programs. In a longitudinal study of the Evansville-Vanderburgh, Ohio School District, fourth graders were found to maintain the academic advantage obtained during their participation in full-day kindergarten (Humphrey,1983).

Full-day programs are more expensive. They require additional teaching staff and aides. Some savings in bus transportation may be made. However, more classroom space may be required if all kindergarten children are required to attend full-day programs. There is also the fear that when children attend the same time frame of program as older children, teachers may be more likely to press for academics as is done with the older grades. Another fear is that the extra half-day in kindergarten may simply become more like "baby-sitting", since teachers are accustomed to half-day provision of program. It is possible that some children need a full-day program, because of lack of preparation for school learning or because of chaotic home situations. Others may not need more than a half-day program and may thrive if they are permitted that option. School systems that remain flexible and provide several options may best serve the needs of young children just entering the world of formal schooling.

Kinds of Kindergarten Provided

In some communities where poverty, low-educational levels, high family stress, and cultural differences make prediction of academic success gravely problematical for many young children, the question of whether there should be one standard kindergarten or two different kinds, a traditional and an optional type, has sometimes been at issue. Shall there be transitional or developmental kindergartens for children who will not or have not been successful in regular kindergartens and may need another year before they can successfully negotiate requirements of the first grade? Note below Bereiter & Engelmann's (1966) poignant interviews almost a quarter of a century ago with teachers (of disadvantaged youngsters who are in an enrichment program) desperately trying to prepare them for first grade entry for the coming year.

> It is summer. A dozen six-year -old children are playing in a first-floor schoolroom. In one corner some girls are busily playing house. Two boys are pursuing each other around the room on tricycles, playing policemen. Three or four children are seated around a teacher who is reading them a story. Others are seated at a table snipping up bits of colored paper and pasting them onto a larger sheet..."You wouldn't believe how these children have changed [the teacher] tells us. "In what ways?" "When they first came in here, they didn't know how to play. They just stood around. And they hardly talked at all. Now you can't shut them up."
>
> We note that there is much vocal noise, but there is very little we can understand; nor do the children seem to pay much attention to what others say. The teacher tells us the children were given a school readiness test a few weeks before. Almost all of them were a year or more below average. "These children will be starting first grade in the fall, won't they?" "Yes." "How do you think they'll make out there?" "It all depends on the first-grade teacher. Some teachers don't seem to understand how different these children are. If a teacher understands..." "What do they expect of first-grade children in this school?" The question seems to puzzle her. One of the girls who has been cutting and pasting brings her production over to show us. She presents it to us with much pride, but says nothing. "That's very pretty. What color is this part?" "Uh know." "What color is this other part?" "Uh know." "Show me the red part." This she does, correctly and confidently. She can point to every color we name. "Now show me a part that is not red." She points to the red part. "Lift up your hands." Both hands go up. "Now, lift up your hand." Both hands go up again. "Is a boy a girl?" She laughs and shakes her head "No." "No, a boy is not a girl. Say 'A boy is not a girl.'" " A boy a girl." "What do you think it would take to get these children ready for first grade? We ask the teacher." "Time. Time.

> They have so much to learn. If we could keep them another year, then maybe some of them, at least, would be ready to start first grade". (p.2)

Are transitional kindergartens good for at-risk children? Mantzicopoulos (1989) studied 51 kindergarten-eligible children from a school district in Northern California. Seventeen had been placed in a transitional prekindergarten program (TK) on the basis of the Gesell School Readiness Screening Test. Seventeen children had successfully completed kindergarten (PK) group and seventeen children were recommended for retention (RT group). The children were administered the SEARCH, an instrument that taps their spatial and temporal orientations and is believed to be basic to beginning reading. Scores of 5 or less are indicative of vulnerability to learning failure. For the Developmental Test of Visual Motor Integration (VMI), the children were asked to copy a series of increasingly complex geometric forms. They also took the Kaufman Assessment Battery for children (K-ABC), which yields a Mental Processing Composite score, and the Stanford Early School Achievement Test, administered at the end of kindergarten. The SNAP Rating Scale provided a quantification of possible attention deficit disorder with hyperactivity.

What did the comparisons among the groups show? The TK and the RK groups were significantly younger than the PK group which also had a significantly higher mean on the SEARCH and on the K-ABC. Teacher predictions for reading failure were highest for the TK group. Both the TK and the PK groups were rated by their teachers as significantly less likely to develop learning difficulties than the retained group. Thus, children in the transitional prekindergarten tested comparably to their retained peers on academic, demographic, visual-motor and perceptual measures. They were _not_, however, rated by their teachers as likely to develop learning problems in school, and they did not show the behavioral deviances of the retained group. These findings do suggest that after one year of school, at-risk children assigned to transitional programs "may be better off, at least behaviorally, than their at-risk peers assigned to regular kindergarten programs" (p.6).

Katz et al. (1987) in their study of district kindergartens in a midwest community did not feel that different kinds of kindergarten best served the interests of young children, despite differential readiness. They recommended elimination of the optional kindergarten and merging of all children into developmentally appropriate K classes despite the fact that preparation of the children for schooling differed extensively.

Age At Entrance To Kindergarten

Some school districts have quite narrowly construed "windows" in terms of date-of-birth requirements that do not permit a child to enter kindergarten unless the fifth birthday has been attained before the start of the school year. Other programs permit entry of children whose fifth birthday will not occur until December 1st, well after the beginning of the school semester. Some districts show rigidity in not permitting a child below the mandated age cutoff point to enter kindergarten despite years of preschool preparation, high parental support for intellectual activities, and evident reading readiness skills. Other districts will permit assessment of such a child by qualified testers in order to ascertain whether the intellectual development (as indexed by IQ cutoff point often about 130) of the child warrants making an exception and allowing a child who just misses the district's mandated cutoff point to be admitted to the kindergarten program.

In many cases in my current experience, educated middle class parents are deliberately choosing the option of keeping children out of kindergarten for an extra year, if they are given that option by district age guidelines. The hope is that then their child will be at the top of the class of the next year. Will such parental practices cause even more deep divisions between the children of poverty brought at conventional age to kindergarten, but with little preparation for the world of intellectual learning, and the older youngster from an advantaged home? How will greater age spreads among kindergarten children impact on teaching styles? On curriculum? Professionally, I feel it inadvisable for advantaged children, richly exposed to the world of books and experience, to be kept back from entering kindergarten because of alleged "emotional immaturity" at five years. A well-trained teacher should be able to accommodate such "young fives" just as he or she accommodates children with impoverished language or lack of exposure to the world of books.

The very group experience available in kindergarten, when managed by a skilled professional, will develop positive social repertoire as well as advance the cognitive abilities of those who were unready for kindergarten because of experiential deficits (Honig, 1987).

Sex of Child

There is a recent trend toward keeping boys out of early entry into kindergarten, with the explanation that males are the more active sex - as shown in the meta-analysis of sex differences carried out by Maccoby & Jacklin over a decade ago. Therefore boys presumably will be less "prepared" to succeed in kindergarten. According to these parents and teachers, whenever possible boys should be kept from entry until they are more "mature". How effective or pernicious for early education are such practices, which seem to be becoming more widespread as parents become more anxious about children's initial success in the school system?

Size of Group

As a cross-cultural researcher I have seen some truly awesome differences in the size of entry classes in school systems. In the Ecole Maternelle in Paris, where one of my children attended initial classes, a teacher could be in charge of as many as 40 to 50 children twenty years ago. Yet discipline was fairly well kept, albeit with the use of sharp reprimands, and occasionally, with the use of physical taps of a ruler on hands or ear pulling, which, thankfully, would not be permitted in most American classrooms with younger or older children. In Japan, too, I have seen almost 50 young children, 4 to 6 years of age, in a classroom with one teacher and one aide. Yet, obedience to classroom rules of decorum was the rule rather than the exception. Some teachers feel overwhelmed with the task of teaching 18-20 youngsters who have not learned shapes, colors, letters, in-seat behaviors or other social rules for school decorum. As one teacher recounted: " What do you do when you have 20 kindergartners, and suddenly miss one? He has decided to leave the room and go wandering in the building looking for his older brother who goes to school here. The child is very indignant when I explain that we must stay in the room, and feels that I am an ogre. He wants to see his brother, and is genuinely resentful that he cannot leave the kindergarten room right now and go where he wishes."

Other children who may have been in group care situations for many years are well socialized into the rules of classroom orderliness or patience or turn taking or appropriate use of materials. The teacher with such a group may be able to handle a larger number of youngsters. But would this be better for their individual development in kindergarten? Perhaps the exact numbers of children per classroom should be assessed by each school. Flexibility and participation of teachers in the assessment of necessary modifications of class size where there are large concentrations of at-risk youngsters about to enter school may help solve the problem for children about to enter kindergarten. Seasoned teachers should be invaluable partners in helping a principal make a decision about classroom size.

Aides in the Classroom

Many districts, in recognition of the particular stress of the first year of elementary school for kindergarten children, provide a classroom aide for every kindergarten teacher. This provision entails extra expenses. It should also entail careful and thoughtful efforts to find an aide who is highly capable and who will receive ongoing mentoring from the primary teacher, but who may come in with less than full educational requirements because he or she comes from the same cultural, ethnic or linguistic group as the majority of youngsters in the classroom.

Promotion, Failure, and Retention Policies

Some people believe that children must stay with their cohort group or suffer shame and gain no benefit from being "left back", that is, failing kindergarten. In some communities, over one quarter of children are either retained for a second year in kindergarten or are provided with developmental or transitional programs. How effective are policies which mandate either social promotion or retention? Shepard & Smith (1985; 1988a; 1988b), after four years of research on the issues surrounding kindergarten retention, are adamant in asserting that kindergarten retention is of no benefit for children's later school success.

1) Kindergarten retention does nothing to boost subsequent academic achievement.

2) Regardless of what it is called, the extra year creates a social stigma.

3) And, most ironically, the practice of kindergarten retention actually fosters the problem it was intended to solve; it feeds the escalation of inappropriate academic demand in first grade.

Shepard & Smith (1988a, p.34)

These researchers analyzed 14 controlled studies on the effects of kindergarten retention. Their predominant finding was that there was no differential effect on children's subsequent achievement. Grendler's (1984) major review of such studies also concluded that at-risk children who were promoted to first grade achieved as well or better than children required to spend an extra year in a transition room prior to advancing to first grade.

In their Colorado study, Shepard & Smith matched extra-year children with control children on sex (mostly boys), birth month, and measured readiness at the start of kindergarten. When they reassessed the children at the end of first grade, there was no difference on standardized math scores. Nor were there differences on teacher ratings of the children's math and reading achievements, learner self-concept, social maturity and attention span. They conclude that "The current fad to flunk children in kindergarten is the product of inappropriate curriculum. Over the past 20 years there has been a persistent escalation of academic demand in kindergarten and first grade. What were formerly next-grade expectations are shoved downward into the lower grade... 85% of elementary principals say that academic achievement in kindergarten has medium or high priority in their schools" (1988a, p.37).

They further note that "The Association of California Urban School Districts reported that children failed in their first two years of school have substantially reduced chances of completing high school" (p.36). Such conclusions must, of course be mitigated by the awareness that emotional vulnerability to feelings of failure may be much higher for some children. As we shall later explicate, caring for the self esteem of kindergarten children as well as for their achievements may decrease some children's vulnerability to feelings of failure at needing further work before going on to first grade. However, a developmentally appropriate program for the K-2 grades should ensure that far more children do not have to"fail kindergarten", but can go on with their age mates to a first grade classroom that supports their learning career with small steps forward, with attention to their current levels of readiness for curricular goals at appropriate levels. Shepard & Smith (1988a) discovered an alternative to retention: "Instead of highly stratified curricula, strict promotion standards, and insistence that teachers adhere rigidly to the authorized curriculum rather than exercising their creativity, [some] schools developed a culture where teachers and principal shared a commitment to adapting curriculum and instructional practices to a wide range of individual differences (p.37)".

Classroom Arrangements

The classic ways in which classrooms or learning situations have been arranged from ages past seem until the past decades to fall into teacher-dominated patterns. Pupils are seated in a semicircle at the foot of a teacher or they are arranged in neat rows on chairs or benches with the teacher at the front of the class. With the advent of Dewey, and, more recently, of Lady Plowden's report on the British Open Schools, classrooms began to change radically for some young children. Piagetian theory was also a powerful support for those who wished to change. Piagetian theory posits that young children learn best when they can have actual hands-on learning experiences with varieties of materials. Children learn best when they can have interactions with teachers and peers such that some of their dogmatic assertions or erroneous ideas are challenged in small social, comfortable, and friendly situations. Interactions with instructional toys and physical objects help children discover for themselves how something works or what will happen if X is done or Y is done to materials. Learning can only occur on the cutting edge of understanding. That is, Piaget's idea of "equilibration" suggests that one cannot learn that which is cognitively too disparate, too different, too difficult, too strange, compared with present knowledge and understandings and capability. Further, if material has been mastered but is presented over and over, the teacher's drills, rather than increase ease of learning for a particular child, may deaden that child's delight in learning. If a child has already played with, experimented with, messed about with, and genuinely understood or mastered a problem (such as how to balance objects on a toy seesaw with a fulcrum, or how to load an aluminum foil barge with marbles so that it just still floats rather than sinks) then that child will be bored and may tune out from learning situations where all children are required to carry out the same assignments at the same level for the same time period in the classroom.

Thus, classroom arrangements have begun to change radically under the influence of theoretical and empirical evidence about the importance of keeping children's interest high and counting on their curiosity to keep them learning. Environments have been devised that provide centers of interest - such as clay, math, science, blocks, and living creatures. The new arrangements of classrooms for young children are designed to capitalize on matchmaking and action principles: children learn best through hands-on activities. Then, no time constraints prevent them from in-depth explorations of ideas and hypotheses they may be testing - whether about what colors will mix to make a deep purple, or whether marbles dropped through a narrow tube faster or slower will rotate or just jiggle in a straight line when they reach the bowl beneath the tube. Teachers can best help children meet the match developmentally in terms of ideas and understandings by providing work spaces, play places, and activity centers.

In such exploration corners, or discovery areas, together with peers, or alone, children actively search for and learn principles through practices. The richer in activities and the more thoughtfully that space is organized, the more likely it is that a kindergarten child will find some materials interesting and engaging enough to work with (play with) for long enough periods of time so that active cognitive restructuring of ideas does occur. Adding a broader range of activities in each area may help children to choose more comfortably, with more satisfaction, and thus lead to their greater cooperation with classroom rules as well as avoid boredom.

Setting up such centers, - having a space-oriented, rather than a time-period-dominated program - demands much teacher organizational and planning time. Gold (1989) notes that teachers in developmentally appropriate kindergarten programs need to have in-depth knowledge of the following areas:

1. child development
2. learning theory
3. language acquisitions
4. instructional techniques
5. appropriate materials
6. evaluation of children's learning
7. parent involvement and education (p.5)

Thus, principals who wish to implement developmentally appropriate practices in kindergartens in their schools will have to find ways to provide planning time for their teachers. So many decisions need to be made: How many art activities can be judiciously programmed in the space available? Can the teacher provide for clay, rice, easels, finger paint, play dough, cornstarch gloop, sawdust and paste, collages, and mobiles construction? How many housekeeping materials such as stove, tables, chairs, shelves for grocery jars and boxes can accommodate how many children in the space allotted? Are there sufficient dress-up clothes and accoutrements for dramatic role play? Smilansky & Sheftaya (1989) have demonstrated in many programs significant gains in achievement scores for disadvantaged youngsters when teachers deliberately promote and encourage the children's sociodramatic play in classrooms. Of course, reading and book centers are crucial. How shall they be placed so that children are not disturbed by more vigorous gross-motor or fine-motor activity of other children?

Teachers who understand Piagetian learning theory will have made decisions about the importance of setting up such centers for kindergarten children and they will have implemented them (Kantrowitz & Wingert, 1989).

Interpersonal Variables

Who is the teacher? The most crucial person for increasing the probability that kindergarten will be a positive growth experience in the learning career of the just-beginning elementary school child is the classroom teacher. For educationally vulnerable children, this point cannot be stressed too much. Yes, a school system may not have great monetary resources. Yes, the school plant may be old and the walls peeling. Yes, the principal may not be conversant with appropriate educational practices with very young children. But if a teacher is well prepared to carry out a developmental curriculum, has serene and enlightened dedication to quality teaching, then his or her implementation of program (if the principal allows autonomy and gives positive support) will do more to ensure early success in the first year of formal schooling than any other single variable.

When children come from educationally facilitative home environments, it probably is not critical to their later school success if a teacher personally feels comfortable or uncomfortable with trying to implement a developmental early childhood program. But a developmentally appropriate program as specified in NAEYC guidelines (Bredekamp, 1986) enhances child joy, creates a cooperative climate in the classroom, and boosts children's zest for learning. Such a program involves planning for and furnishing a variety of activity centers, and a judicious balance in working with children in groups and working with children individually. Flexibility, but not laissez-faire chaos, is a key concept. No one curriculum works best. No one method works best. The excellent teacher chooses, dances along the continuum of choices, makes carefully thought-out changes, adjustments, modifications - to ensure class stability and continuity, and yet to generate excitement for learning.

Whole Language and Learning to Read Through Experience

An important role of the teacher is to imbue the children with a love of book learning. Thus, the developmental teacher emphasizes book experiences and life experiences. "Children who are learning to read through experience must live and work in a classroom environment which is rich with experiences. Only a part of the time can be spent in a program of direct instruction with the teacher. Provision must be made for children to work independently or with small groups on their own "(Lee & van Allen, 1963 p.25). The teacher and children work together in planning and executing book publishing experiences. Each child gets chances to dictate stories that the teacher writes down. Each child gets a chance to illustrate stories, and a chance to create book covers, whether less fancy (scotch tape and staples) or more fancy (glue and cardboard) bindings for his or her own books. Children need experiences with the power of story telling to teachers and from teachers (Goodman, 1986; Stauffer, 1970).

Not only do they need to hear the teacher tell stories and read stories daily, but children need to know that they too are story tellers and story writers. Teachers will need to find time to take dictation of children's own stories. Each individual dictation gives a teacher good ideas for words a child has or needs. The teacher's questions help a child to sharpen the specificity and interest in the story. An adult's genuine interest in the child's story helps the child struggle with ways to explain more clearly or more specifically what she was trying to communicate. Denotative clarity will gradually become developed through this story dictation process.

Children's stories can be filed in individual portfolios. Or they can be hung with clothespins on twigs of a large branch anchored in a bucket of sand. Or they can be displayed about the room.

Lee and van Allen (1963) emphasize that children need to make choices of activities and the teacher needs to invent extensions of group experiences:

> A writing center with paper, pencils of all colors, word lists, and suggested titles will attract many children... When a poem or story is read and gets a favorable response from children, a variety of activities which may last for days can be planned by the children. They can paint scenes, make a movie or TV or prepare a bulletin board with cut-out characters. A group discussion on word sounds or meanings can result in activities such as:
>
> - Collecting concrete objects for a chart or exhibit (things made of cotton, spices, insects).
> - Developing word games to extend and practice the learnings. [Seeing] a film on cloud formation might lead to activities involving:
> - A bulletin board with various kinds of clouds made from paper or cotton.
> - A daily record for a week of the kinds of cloud formation observed.
> - Descriptions of "what the clouds made me think of." Sometimes teachers use a "here's how" period to show children a new art medium, a new technique for binding a book, some unusual way to write riddles, or the use of new science equipment...It is only when children have a part in describing the "what", "why", and "how" of daily activities that they can feel a personal satisfaction in taking responsibility for them. (pp.107-108)

The authors go on to suggest specific activities that comprise the "Learning to Read Through Experience" approach. They recommend "Building with Words". Teacher makes a word pyramid as in:

TREE
GREEN TREE
TALL GREEN TREE

Another activity they suggest is "Story Train". Five chairs are placed at the front of the room, one behind the other. The child in the first chair is the engineer. She starts a story by saying, "On my way home I saw a rabbit (or something else)." The children in the following chairs each make a complete sentence about the thing the engineer has seen. The child in the last chair repeats the whole story, just as the others recounted it. This activity helps children to be more observing, to tell more than one thing about something that they have seen, to become aware of descriptive words, to make complete sentences, and to be good listeners.

Early Writing

Toddlers scribble. Preschoolers often make elaborate efforts to cover a page with squiggles in pretend (or to them very real) letter writing. Teachers need to help young children understand that words in a text are written down spoken words. Thus, every picture can be signed, even if the child just makes an M for Michael with laborious strokes. Children have imaginative ways to create spellings. Madeleine at five years signed every picture with MEEEEE. There were lots of E's in her name!

Invented spellings are the children's creations. In one busy kindergarten class where I was a consultant, the teacher victoriously grinned as he showed me a wonderful picture of Western horses and cowboys a child had drawn. Triumphantly the child had entitled and explained the drawing "HRSLVHR" (Horses live here.) Teachers who encourage early invented spellings (and gradually in one-on-one sessions introduce the conventional ways that words are spelled) will be supporting the originality of budding young writers, and ensuring that children do not feel overwhelmed and discouraged by the seemingly bizarre and mysterious ways in which English words are conventionally spelled.

Metacognitive Skills

When children are at risk for potential school failure, the the importance of interpersonal skills and metacognitive skills and creativity become particularly critical for a teacher. Metacognitive skills are those that help teachers think about what they are teaching, how they are teaching it, how each child is or is not grasping new concepts. Metacognitive skills keep a teacher always evaluating, assessing, and creating new ways to accomplish her or his goals for the children. Therefore, the question of who is the teacher becomes exceedingly crucial. How is he or she trained? How much child development knowledge is analytically and compassionately brought to bear on the special needs of children, whether they are flourishing or in difficulties in the classroom.

Child Development Theories

Theories can help teachers understand children better. No one child development theory is sufficient. But an in-depth knowledge of child development theories can provide a resource for the teacher with many different kinds of learners in the classroom. Let us look at some theoretical models of child development that might be particularly pertinent for kindergarten teachers, that can help in their search for resources to enhance metacognitive reflections. What theorists can help teachers 1) optimally facilitate the learning career of each individual child in the classroom as well as, 2) foster group learning experiences that will promote child adaptation to the particular world of school and class instruction? Some child development theorists have given us a good working model of what young children are like in their learning experiences, in their socialization struggles to become more mature in response to adult requirements, and in their ability to get along in prosocial ways with peers.

Erikson

Certainly the ideas of Erik Erikson are critical for teachers to absorb profoundly. His dialectical system teaches us that young children see-saw between polarities that are more positive for development, and those that contain darker forces, charged with energy, but less likely to help the child succeed at the adult-imposed tasks of self-discipline, hard study, cooperative social actions, persistent attitudes toward difficult learning tasks, and positive compliance with caregivers.

Eriksonian polarities that pertain for the earliest years are:

Trust vs. mistrust
Autonomy vs. shame or doubt
Initiative vs. guilt
Industry vs. inferiority

The support of loving and teaching adults for a positive ratio of the left- hand attributes to the right- hand attributes is essential if young children are to do well in their school work and their lives. Older children may be able to learn algebra with a fine math teacher whose skills at her specialty are excellent but whose interpersonal skills and self-awareness are in short supply. Teachers of the young must be trained in self-reflectiveness! The kindergarten teacher needs a special additional kind of education beyond methods and materials courses and attention to the creation of syllabi that will cover state-mandated curricular areas. The kindergarten teacher needs attunement to the power of teacher words to wound, to comfort, to inspire. Teachers can shame and discourage children. They can be role models and encouragers that help insecure or angry or even hopeless young children to blossom into assured learners.

Eriksonian dialectics, then, becomes a key conceptual tool. Insight into these polarities can help teachers empathize with a child's seesawing emotional distressful feelings, and deal with child anger without summoning up his or her anger, indignation or sense of failure at a child's ignorance, unsuitable behavior, noncompliance, or slowness in grasping concepts and requirements.

Bandura

Bandura's theory explains that children will try hard at new learning tasks if they understand clearly what the outcomes will be and expect that these will be good outcomes for them. Children also assess how competent they are to affect the outcomes that are desired. Children with poor self esteem will therefore be far less likely to assess that they are capable of studying and learning new materials or subjects that are difficult for them. Children with positive self esteem may understand that the learning required by the teacher is highly important and desirable. Such children may feel that even though the new material or idea seem mysterious, they are willing to try. They have an optimistic feeling that they can do it- they can be successful learners. Teachers _must_ be boosters of child self esteem if they want to succeed in instructional objectives with some children. Learning instructional objectives, how to write lesson plans, and how to sequence learning activities is not enough. The early childhood educator needs subtle understandings of human relationships with young scholars and interactive communication skills to match understandings.

Some children will only learn for someone who cares intimately and personally about them. That is an emotional truth teachers must become aware of just as they are aware of the preoperational status and more limited cognitive power of some of their kindergartners and the more mature concrete operational functioning of others.

Piaget

Piagetian theory postulates that children move in orderly, lawful and sequential stages toward more sophisticated and complex cognitive understandings. Kindergarten children often come to class at widely differing levels of cognitive preparation for the curriculum and goals of the kindergarten classroom.

Some of the children may well be at the concrete operational level of functioning (Donaldson, 1978). Not only do they have a superb command of most of the syntactic rules necessary for regular English speech patterns. They may also be able to write their own name, identify shapes, colors, and letters, can sit still to answer questions about complex and lengthy stories, have fairly lengthy attention spans, and persistence at somewhat difficult learning tasks. Other children will still function somewhat at the sensorimotor level. They will need to feel and manipulate materials in order to understand physical concepts, such as differences in weight, mass, length, and hue, etc. They especially will need to manipulate materials to learn logico-mathematical concepts, such as pairs (Kamii & DeVries, 1978, 1980).

Many of the kindergarten children will be still mostly in the preoperational stage of development (Wadsworth, 1984). They will find reversals of thought quite difficult, although they will be able to classify and to seriate objects and toys quite well, and even be able to fill in missing objects at the conjunction of two intersecting sets. For example, suppose a teacher is carrying out a felt board activity for the story "Caps for Sale." If there is a group of assorted caps in different colors and a bunch of monkeys of assorted colors, each wearing a cap of the same color as the monkey, then the kindergarten child should be able to find the correct color cap for the blue monkey who is needs one.

Kindergarten children's preoperational level of functioning has important implications not only for cognition and reasoning ability. Teachers need to understand profoundly the implications of preoperational functioning for children's emotional relationships with them in the classroom. Preoperational children are particularly puzzled when confronted with the possibility of two conflicting feelings. They may well be able to comprehend having two of the same feelings - for example, being happy with the teacher's praise for an easel painting and teacher's pleasing provision of cupcakes for a peer's birthday party. But it is far more difficult for the preoperational child to understand that the same teacher who frowns in disapproval of toy snatching or becomes angry if one child hits another is also the person who sincerely likes this child and enjoys having her in the classroom.

Teachers need to be sensitive to the needs of young children who still have some sensorimotor functioning, some preoperational functioning, and the beginning of concrete operational functioning. In today's world, where many parents, fearful of the possibility that their child might "fail kindergarten", are keeping the young five year old back a year before entering the child in elementary school, the range of abilities of entering children in kindergarten may become even larger.

Freud

Teachers who are sensitive to emotional-social development of children and social interactions with parents will do well also to learn some of the Freudian defense mechanisms. Defense mechanisms are used to prevent flooding with anxiety or loss of positive ego regard. Some are noxious and impede positive communications between persons. Some, at worst, can destroy trust and make life aggravating and even hellish for adults and children alike. Particularly, I suggest the following Freudian defense mechanisms need to be well understood:

Denial of reality. Suppose that a child is aggressive and inappropriately intrusive into other children's play and is strongly shunned and isolated by his peers. Suppose, during a parent teacher conference, the parent denies strenuously that there is anything wrong with the child and assures the teacher that the child has lots of friends in the neighborhood and gets along just fine with other kids. The teacher will need to be very skillful to describe behaviors that are of concern to him or her, and enlist the parent's help in supporting more positive interactions among peers. The parent, upon hearing the teacher's concern, may use another mechanism called

Projection of evil. When a person deals with shame feelings or forbidden impulses by accusing another of all wrongdoing and claims that all the difficulties being discussed are entirely the fault of the other, this is projection of evil. Adults sometimes accuse a child of causing all the troubles in the family.

Teachers sometimes accuse a child of being a troublemaker and disturbing the class and "forcing" the teacher to yell or to punish the class. Children often say "He made me do it," or "He was bad. I didn't do anything, teacher." They may accuse a playmate if they are in trouble because they have disobeyed a class rule or a parental stricture. Projection of evil is a serious distortion of reality. There are adults who cannot bear the painful thought that they may have to modify their own behaviors in order to ameliorate a situation vis a vis a child. They would rather say that anyone else is to blame - a parent, a teacher, a neighbor, a child.

Other Freudian mechanisms that teachers will need to become aware of, are: disassociation, isolation of affect, regression, repression, identification with the aggressor, and introjection. Teachers may want to learn about "reaction formation" which is characteristic of the super sweet or extremely obedient child who may be fearful of the consequences of any naughty impulses to be selfish or disobedient with an adult. They may also want to understand the power of "sublimation", by which early forbidden sexual impulses or desires can be turned to the service of passionate curiosity and desire to learn the secrets of the universe - including school subjects!

Ideal Kindergarten Teacher Characteristics

Based on the ideas and concepts from researchers and from child development theorists, what are some of the "ideal" teacher characteristics to look for if optimal development and learning of kindergarten youngsters is to be assured? Once these characteristics are specified, then it will be necessary to examine the teacher training programs of the State to find whether there is a match between courses and programs and internships offered and the kinds of persons who can best serve the needs of young children entering the school system.

Find Each Child's Gifts

Value the gifts of each child. One child may be slow in learning letters but be a marvelous doodler, or be able to throw and catch a baseball with his dad over 20 times without ever dropping the ball. One child may be shy and unskilled in peer group entry skills. But he may be able to imitate animal sounds wondrously well as in the Japanese children's story "Crow boy" (where the isolated child could imitate superbly and knew all the habits of the wild crows in that mountain village).

Respect the Personhood of Each Child

All persons are different as well as sharing needs for food and drink and sleep and hugs and laughter and friendship. Yet each child has different styles of learning, different tempos of responding. Some talk in a rush, very fast, with words tumbling all over. Another speaks slowly, choosing words carefully. One child needs to work alone and finish every bit of work before she feels comfortable that the teacher can look at her work. Another child cannot bear to work unless the teacher reassures and stands nearby and approves of each small stage in the child's attempts to fill an assignment. Some children are restless. Their legs swing; their heads bob; their fingers pop. They wiggle in their seats. Others can sit more quietly. Some have a charming cheerful modest grin. Others guffaw loudly. Some giggle a lot. Some are more solemn and can only be coaxed into brief smiles by a loving teacher with whom the child has built up a trusting relationship built on kindliness and perceptivity to the special person that this child is.

Research on child abuse shows that there are five kinds of abuse: physical (burns, bruises, etc.); sexual abuse; physical neglect (the child may come to class smelling strongly of urine, or with dirt on the body, or with unwashed clothes for a whole week's time); hostility (emotional criticism and ridicule and contempt); and parental noninvolvement. At the University of Minnesota, toddlers who had suffered from indifference and noninvolvement showed the greatest drop in IQ (over 30 points) over the first years of life (Egeland & Sroufe, 1981). Children need attention from an interested, teaching person, who is for them, who cares about them and understands them. Without this emotional foundation, learning is difficult. The child blossoms as a learner in a climate of caring. Until ego strength is built, the kindergarten teacher who has a child without such relationships in his or her life will have to build such a relationship as the primary learning goal. For to expect that the syllabus or lesson plan can be carried out with this child who has no cushion of emotional positive relationship to support his learning career is to err seriously in understanding the psychology of early childhood and how young children learn.

The Teacher Provides a Model of Calmness and Coping

The quality kindergarten teacher models calmness and conviction that she or he is in charge, that this classroom is a safe learning environment for a group of children. No child will be shamed before others - for toileting accidents, nose picking, for being "a crybaby", for using words like "shitty sickness", when explaining an absence, rather than "diarrhea", or not knowing that if you have five apples and eat two there will be three left. Furman (1986), a psychoanalyst who has done a great deal of consulting with the Hannah Perkins program for emotionally disturbed preschoolers in Cleveland, Ohio, firmly comments that the major task of the early childhood educator is to create such secure classroom environments. Then children feel that they are safe to learn, capable of learning. The teacher, in addition to helping children feel safe and secure so that they can release their emotional energies for learning rather than for defensive protection of their young egos, serves as a powerful role model for young children. In some classrooms with immature children, who did not know how to tie shoelaces, I have regarded children trying to be helpful by kneeling down to twist laces as if tying them for a cherished companion, who was tripping over them in play. The teacher in that classroom was nurturing, calm, cheerful and always helpful and kind. Perceptive in noticing when children needed help, without being intrusively mother-hennish, he modelled prosocial skills in such varied ways, that the children took on many of his mannerisms of helpfulness, cooperativeness, and concern for each other. Patience, waiting turns, genuine interest in rich sociodramatic play episodes, can boost not only the Caring Quotient of the classroom (Kobak, 1979) but also the achievement of low income young children (Smilansky & Sheftaya 1989).

Some adults think of themselves as bosses of children, or as shepherds herding sweet but dumb animals. Only genuine regard for the personhood of young children, and a constant attunement to the effects of one's own adult behaviors can help change the impatience or herding behaviors or lack of sensitivity to bullying or scapegoating that some adults show. Researches by Sroufe (1985) as well as by Wittmer and Honig (1988) with preschoolers have demonstrated the dangers of teachers being hooked into the same kinds of inappropriate or negative interactions that children have experienced only too thoroughly at home.

It takes enormous personal power, metacognitive awareness of one's role as a nurturer as well as educator in order to avoid being sucked into resentful or rejecting interactions with a kindergartner who is adept at what Patterson has called "coercive interactions" that call forth angers and aggressions from the caregiver and, in turn, lead to escalations of conflicts with other children. Not only is the quality kindergarten teacher a prosocial role model, but also a beacon of safety and security in the classroom and on the playground (Wolfgang & Glickman 1986).

Many adults use outdoor recess time to talk with other adults. Some feel that to hover over children releasing boundless energies spend up in the classroom would be counter-productive and intrusive. Yet children need adults nearby and ready to be responsive to needs to share elation at catching a ball, or ready to help if there is a fight over a game play. Part of the genius of a thinking teacher is to realize how he or she is dancing the dialectical tightrope between freedom (having prepared environments so that children can learn freely through use of carefully provided materials and opportunities for discovery) and directive intervention - times when one is far more directive and supervisory and evocative in dialogues and teaching interactions with children. Without a dialectical viewpoint of the role of teacher, it is difficult to do well by all children.

Children differ in rates of learning, in areas of competence. Not every child can re-invent arithmetic for himself or herself. Some need and want more adult supportive scaffolding in teaching interactions that gently lure and lead toward small new steps on the developmental ladders of learning (Honig, 1982). Taking only one rigid position, that the children must always learn on their own is counterproductive. Only attunement to the special needs for learning of each child will help each child flourish as a learner. In day care some centers where teachers are posted at activity centers and children may wander freely and choose their own activity and spend as long as they need at it, some children will still prefer to be where the cook is! They know what activities (pleasant ones!) will go on there. Children, if really given choices, must also be able to choose freely to have an adult more helpful and interactive than some proponents of Constructivist programs may feel comfortable about. But children's progress and comfort comes before that of adults who like to reify theories sometimes to absurdity. One teacher-trainee came to me in tears because she had tried to help a five year old learn how to make patterns with rubber bands on top of nails pounded into a square board. The head teacher, a rigid interpreter of Constructivism, criticized her for intervening in any way to help the youngster, who was to discover only on his own! He had been trying without much interest or success until the young student teacher entered the situation with her enthusiasm and interest in the struggling child. Such criticism makes no sense. Any rigid application of any theory of child development or education is bound not to fit some child in some classroom situation! Dance flexibly. Diagnose. Remediate. Try. But some ideas work only for some of the children some of the time.

Hone Matchmaking Skills

Teachers who want young children to succeed at their first formal class learning experiences must match the materials and the presentations to the level of current understandings of the particular child being taught. Piagetian equilibration theory teaches us that new material must be at the cutting edge of the child's knowledge base. If the materials are just a bit novel, a bit challenging, a bit difficult, then the emotionally secure child will take intense pleasure in the learning experience and even want to practice the new skills or deal with the new materials over and over until they are mastered. This careful matchmaking means that just going by a lesson plan book is simply not enough. Matchmaking (Honig, 1982) means individualizing and tailoring the teaching of new concepts. Some children may well need preparatory skills or knowledge before they are ready for the ideas or new learnings that are in the lesson plan book. Other children will find the lesson trivial and need to be challenged with variants and further learnings for which they are ready. This need for matchmaking points up the necessity for kindergarten classrooms to have a very well-trained aide so that more individualized teaching can be carried out when particular children do not fit the model child for whom the curriculum has been devised. Responsive teachers (Lay & Dopyera, 1990) tune into entry level skills, to more sophisticated thinking abilities, to the more constricted or richer knowledge base of each individual child. Then they dance the developmental ladder (Honig, 1982). They adjust their lessons and levels of explanation and supportive scaffolding for new learnings to the needs of each learner. Model educational programs have demonstrated the need for varying group teaching with one-on-one tutorial in order to boost successes for at-risk young learners (Slavin, et. al., 1990).

Become Skilled at Science and Math

Young as they are, kindergartners are gradually introduced into the world of physical causes and effects, the work of counting and comparing, the world of systematic exploration. Teachers need to be conversant with science materials and math materials for the very young (Castaneda, 1987). They need expertise in presenting experiences that will further a child's learning of natural sciences, biological systems, numerical assessments, and the like. Without course work in the domains of science and math a teacher may be warm and loving with young children, but not as likely to further a growth of their knowledge and interest in a wide variety of domains - such as rocks, trees, earthworms, potato plants, sprouting seeds, food habits of gerbils, terraria needs. Primitive chemistry, physics, zoology and other scientific disciplines can be introduced early if the kindergarten teacher is skillful.

Create Language Splendor in the Classroom

The excellent kindergarten teacher uses cadences, turns of phrase, delightful conversational ploys, caressing words, jokes, poetry, careful rule stating, friendly suggestions and concerned reflective listening (Gordon,1970) to children's worries and upsets and confidences. Such Transactional Analysis techniques will convince children that their teacher really understands them. They will also become convinced that language is a splendid wonderful treasure.

In some homes, language is used for "manding" - a Skinnerian term meaning that family members may use language mostly to give orders or requests to children (see Horner, 1979). Or language may be used to threaten or insult a child. The teacher's task is to awaken a love of fair words, a love of cadence, a love of the rhythms and beauty of language and the potential richness of expression rather than use of what Tough, (following Bernstein) has called the "restricted code" (1980).

Use Fair Rules

Fairness in the classroom is very important to young children. They feel more justice if rules are few and clearly explained. Children learn by watching the teacher and other children carefully to find out what are the consequences of misbehaviors and approved behaviors. They can learn classroom milieu rules of a teacher if they perceive these as being applicable to all and reasonable for the safety and smooth continuance of classroom business.

Baumrind's (1975) work with parents across a wide range of socioeconomic backgrounds has shown that neither permissive nor authoritarian parenting styles work well with children. Both take power away from a child to be an autonomous, responsible partner in encounters with caregivers. The permissive teacher invites chaos, child wandering, and lack of direction for learning. The authoritarian caregiver assumes all rights and regards the child as having all responsibilities -not a situation guaranteed to create self control and responsible prosocial caring for others or striving to persist at difficult or frustrating learning tasks.

Baumrind reports that, consistently, the authoritative discipline style worked best. High expectations were held for children's learning and working toward developmental goals. Yet the caregivers showed genuine interest and engagement in the children's efforts. The adults were for their children. They had clear rules and regulations. But their rules were reasonable and reasons were given to children. Baumrind's authoritative parenting style works best not only for parents, but also for teachers. Have high expectations, show genuine interest in the child, and be for the child, even when the child has gotten into a scrape or trouble. The French book "Joachim a des ennuis" is an amusing and charming book about how the teacher, who is firm, strict, fair, and caring in a French elementary classroom, stands up for her children under trying circumstances when the principal may be angry at one or another of them.

Cultivate Flexibility and Attunement

These characteristics of the best of infant caregivers (see work by Ainsworth, Honig, and others) can also serve the kindergarten teacher well. Some days are just catastrophes. Some children who are usually a pleasure to have in the class may have a big trouble at home and act out in amazingly disconcerting ways in the class for the next weeks. Flexibility can save sanity.

Provide Psychological Safety

All children need to feel not only physically safe, but psychologically safe. Teachers need to be alert that no bullying goes on, no scapegoating is allowed to slip by. Sometimes, children lure caregivers into re-creating the same negative interactions in classroom as go on at home (Wittmer & Honig, 1988). Sometimes children seem to inspire the same whipping boy/bully relationship with another child as they have experienced at home. Teachers need to keep each child safe from ridicule and threats to the psychological safety of being, as well as ensure physical safety.

Provide Books in Profusion

The classroom should appear to children as a treasure trove of all levels of books - on an extraordinary variety of subjects. Dinosaurs of course! But books that will inspire curiosity, inspire the imagination, awaken the sense of humor and the dreams of young children as well as help them learn to read, must be everywhere available.

In some communities, local libraries allow an Early Childhood Facility to take out 35 books per month, on a rotating basis. Teachers will be able to afford a collection of diverse materials to satisfy different children's needs. One child, whose parents are fighting bitterly over a divorce, enjoys the monsters in Maurice Sendak's "Where the wild things are". Another child appreciates the soft pastel watercolors of Ezra Keat's beautiful stories about black children's lives. Librarians can be helpful in finding resources for children for whom English is a second language. For example, the Philadelphia Please Touch Museum for children includes ethnically diverse materials such as the book "Como crescen los perritos", with Spanish text and splendid photographs of a mama dog and her puppies.

Room arrangements can invite children to pore over books. Bean bag chairs,a low slung couch, small chairs and tables, and quiet corners with piled pillows or Army/Navy store mattresses help lure children to retire there with a favorite book or a well-loved and well-memorized story. The"Cat in the Hat" of Dr. Seuss is a story that some kindergartners can "read" perfectly page after page long before they have actually learned to read.

Teachers need to be great story tellers as well as book readers. By their example, they can lure, transfigure, invite, and entice youngsters into that land where love of books becomes a cherished as well as indispensable ingredient of a child's school experience.

Engage in Turntaking Conversations

Tizard (1981) has reported that the number of turn-taking conversations in working class families is much higher between parent and child compared with the number between early childhood educator and child. The teacher in the classroom has so many other children to care for that it is difficult sometimes to give one's attention fully to the question a child wants pursued, an idea that she wants explained, a puzzlement that he wants cleared up. Yet in turn-taking conversations, pursued until children are satisfied that they understand what they came seeking to understand, lie the possibilities for teaching a child to value the use of words over actions. So many emotionally disturbed youngsters use fists and hurl objects rather than words. Indeed, in classrooms for emotionally disturbed 6 and 7 year olds, I have heard their wonderfully patient teachers remind them to "use your words" over and over, as the impulsive frustrated children started to disorganize aggressively. The genuine focused attention of a caring, teaching adult is a mirror for the worthiness of the child, and is a priceless gift for a child (Briggs, 1975).

Enhance Self-esteem

Many of the above teacher behaviors, of course, will result in enhanced child self- esteem. Since learner self esteem has been deeply implicated in learner willingness to tackle classroom lessons, every teachable moment should be utilized to approve of and encourage the child who has poor self image and lacks self-confidence in his or her learning abilities.

Teach Children to Identify the Consequences of Behaviors

Shure & Spivack's (1978) research with their ICPS (Interpersonal Cognitive Problem Solving) techniques revealed that children, both withdrawn and aggressive youngsters, profited after three months of the ICPS program by becoming more cooperative and sociably compliant in the kindergarten classroom. Of the skills taught in ICPS, two stood out as particularly effective in helping children become more socially well adjusted and able to solve their own social conflicts. The ability to identify the consequences of a behavior was an important child skill. Sometimes a child wants to or does start to grab a toy from a playmate. Ordinarily, a teacher moves in and restates classroom rules about children who have a toy first, or rules about sharing. The ICPS trained teacher moves in to ask "What will happen if you grab his toy?". By pursuing this pattern with the young child, an adult can get the child to think more and more before impulsively carrying out an inappropriate, or ineffective, or disapproved action. The second ICPS technique found to predict positive social functioning was the children's ability to generate alternative modes of solving their social problems. The more that children were challenged to think of what else they could do besides hitting, grabbing, etc., the more adept they became at generating other ides for how to handle their social conflicts. Shure and Spivack, moreover, found that the number of solutions thought up and not the quality of the solutions, predicted amelioration of social interactions for children with difficulties.

Learn and Use a Large Number of Positive Discipline Techniques

The skilled adult needs a great many tools for discipline in the classroom or the home (Stone, 1986). Not all discipline techniques work all the time with all children (Honig, 1985). Some teachers only use behavior modification as a classroom discipline tool. One method is not enough. Redirection of a child to an appropriate and not disallowed activity, use of the

Magic Triangle (Honig, 1982) to create a high interest in an activity so that distractions and irritations are shut out, and use of logical consequences (Dinkmeyer & Dreikurs, 1963) are some of the positive discipline techniques that teachers will find helpful. Dreikurs, Grunwald & Pepper (1982) suggest that more democratic methods, such as class group discussions about rules, about expectations, about troubles and conflicts can be helpful. Children feel that in their class meetings, they themselves help to shape and monitor and ensure "sanity" and good working conditions for all the children in the group. Honig & Pollack (1990) have found that circle time discussions, plus class gold stars given for each child's reports of cooperative, kindly acts by a peer, boosted class prosocial interactions.

The quality kindergarten teacher does not apply just one discipline method for all young children. Some children burst into tears at a sharp tone. Others will settle back into busy cheerful work after a sharp rebuke, as if it is a relief to be sure that the adult is in charge of keeping a peaceful and busy classroom going. One little boy I knew, when put behind a screen with a chair during a brief time-out, took out his penis and urinated thoroughly over the whole area. Behavior management techniques work well for some children. They may cause vengeful responses in others. It would be well for kindergarten teachers to read Transactional Analysis materials, such as Gordon's (1970) "Teacher Effectiveness Training" book as well as Adlerian materials, such as the STEP program materials. STEP created as a parent training program but now available for teachers too, helps adults see that the goals of misbehaviors may vary widely among children. Children who are noisy or annoying may simply need teacher attention. If that is the goal, teachers can plan to give positive attention contingent upon busy, productive working and upon appropriate interactions. However, the other three goals of misbehavior may be harder for teacher to deal with. Some children crave power. They need to show an adult who is boss. They may do this by clowning, so that the class attends to them rather than the teacher. Some children, more seriously, seek revenge on adults for the neglect and mismanagement they have experienced with family caregivers. They need teachers who will not be sucked into power plays and vindictiveness despite the provocations such children may offer. Other children escape having to work well by showing inadequacy and discouragement and giving up very easily. Encouragement of tiny steps forward, luring such children up the "developmental ladders of learning" in each area of the program is imperative. Adults who show discouragement in such children only confirm the children's worst fears about themselves.

Vary the tempos and patterns of the day. Young children may not have a long attention span. Given the television world in which many have been brought up, spending long periods at similar activities may result in flagging interest and child tuning out. Variations on kinds of activity, indoor vs. outdoor, quiet vs. boisterous; demanding fine motor control or not, allowing free artistic expression or requiring careful attention to a model, etc. are useful methods to keep children's interest and commitment to learning from flagging.

Boost Nutrition

Many children come to school without a nourishing breakfast. Fortunately, many school programs currently provide hot, nutritious breakfasts so that small children have the energy to commit to class work. Some children are at-risk for nutritional deficits because they do not get balanced meals at home, and their diets are low in Vitamin C, iron or other essential nutrients. Honig & Oski (1986) have demonstrated that, for infants, lowered IQ, high irritability, lack of goal directedness, low attention span, and solemnity are characteristic for iron deficit. Teachers alert to such behavioral signs may want to work more closely with food service personnel and school health staff to see that special assistance is given to remediate nutritional deficits.

Provide Opportunities For Release of Stress

A recess both morning and afternoon for full-day kindergarten and at least once per half-day is a good antidote to tensions and stresses that build up when children are in a classroom environment. Space to run and shout and joyously let off steam are important for young children. Other tips for teachers to reduce children's stress are available in Honig (1987).

Decisions about Screening and Assessment

Judicious re-thinking of screening and assessment procedures currently in use or not in use can add to positive improvement in kindergarten practices. Three major factors have to be addressed: screening prior to kindergarten, teacher assessment, and testing for making educatonal decisions at the end of the kindergarten year.

Screening

The first factor has to do with whether screening for kindergarten entry is carried out. This will comprise making decisions about when to screen, whom to screen, and what instruments to use if screening is done (Grund, & Salernot, 1982; Hall, 1979). In addition, and perhaps most crucially, rational choices must be made as to what to do with screening information.

What kinds of tests can be useful for assessing the readiness of preschoolers for success in kindergarten? There are psychometric tests, such as the Stanford-Binet, that will give an excellent and valid IQ score or the McCarthy (1978). However, these tests require highly skilled administrators, and may not be useful in view of the fact that in a developmentally appropriate program, the teachers must learn to teach the children whatever their social and academic skill levels of entry. More useful might be achievement tests, such as the Caldwell Preschool Inventory. This test is short, easy to administer, requires very few items (such as a box of crayons, a box of checkers and toy cars), and gives a very clear idea of entry level knowledge. For example, some items are: Where would you go to find gas? How many wheels does a tricycle have? What crayon is the color of night? Say hello very loudly.) The standardization sample revealed that middle class youngsters at age four years were able to answer correctly as many items as six year old disadvantaged children from an urban inner city. Thus, such an achievement test can be very helpful for alerting teachers that some children need more flexibility with kindergarten goals and more help in reaching them. Some achievement tests, especially group tests, may not be appropriate (Kamii, 1990).

The Wide Range Achievement test, the Boehm Test of Basic Concepts, and the Peabody Picture Vocabulary Test (PPVT) can be useful. The PPVT is particularly appropriate for shy children or children with difficulties in expressive language. All the child has to do is point to the required picture (e.g. Show me bed. Show me running. Show me stethoscope). If the teacher is assessing a non-English speaking child and someone can be found who speaks the child's language, the PPVT not only can be used to assess receptive vocabulary, but also provides a rough idea, via a converted score, of intellectual level of functioning. What must be kept in mind always is that the screening procedure is not designed to keep children out of kindergarten. It should be designed to provide the teacher with intellectual ammunition - to help prevent discouragements and failures for those children entering with less preparation for success. Failure in the early grades is the most powerful predictor of later school drop-out.

Thus, the screening results must be used to help children by providing more tutoring, by graduating the class requirements so that the child can move forward in smaller steps and with more encouragement for successes in relation to entry skills and not in reference to lesson plan goals.

Assessing the Developmental Appropriateness of Program

The second factor has to do with decisions to assess in order to see how the kindergarten program is being carried out, how successfully programmatic philosophy is being implemented, and how well developmental practices are being implemented. This assessment process may be ongoing or, it may be infrequent. It may involve collegial cooperation for teachers who participate in "looking in each others classrooms", as it were, to help each other out by keeping assessments of this type of formative evaluation- focused on helpfulness and on providing a data base from which to improve and further fine-tune program processes. Such classroom assesssments have traditionally been carried out by principals. However, if a principal is not knowledgeable about developmental practices with young children, then he or she would not be an appropriate person to carry out assessments of kindergarten practices, of collegiality in promoting the best interests of children, particularly youngsters either-at-risk or advanced in reading skills compared with other kindergarten entrants.

What more formalized techniques are available for assessment of developmentally appropriate practices in kindergarten? The

ECERS (Early Childhood Environment Rating Scale) was used in the Bryant, Clifford & Peisner (1989) analysis of North Carolina kindergartens. The sensitivity of this instrument is indicated by the finding of many indicators of inappropriate practices, such as "long periods of whole-group instruction, too many dittos and worksheets, and an overwhelming predominance of teacher-led instruction"(p.9) rather than activity centers.

Another tool that is easy for teachers to learn is the ABC scale. ABC III is a checklist of teacher behaviors and interactions with children from 3 to 6 years of age. The categories of adult interactions include langauge, Piagetian concepts, promotion of positive social interactions, methods of discipline, etc. The single ABC sheet can be easily used for checking off every two minutes any teacher behavior. Totals in each of the subcategories will give a profile of the proportion of the total teacher repertoire that a particular item (for example, reads to child) or a particular category (language interactions) represents. ABC scales have been shown to be sensitive to intensive training efforts to enhance teacher skills with preschool children (Honig & Lally, 1988).

Of course, no assessment of teacher effectiveness at carrying out developmentally appropriate pracrtices would be useful if the information were just used to criticize teachers. If classroom assessments show that a teacher needs retraining, or, best of all, perhaps, mentoring by a master teacher, then supervisors need to be prepared to suggest materials, books, program visits, and refresher University course work, etc. that can be made available to the teacher. Principals, particularly, will need to rethink the importance of giving teachers time to retool - time to plan, time to take courses. They will need to provide moneys for classroom materials which will permit the set-up of activity areas and the provision of rich literature offerings. They may want to offer a subscription to "Let's Find Out" - a children's magazine for kindergarten. They may want to have a shelf of good books to stimulate teachers' creative programming juices - books such as Marzollo's (1987) "The new kindergarten: full day, child-centered, academic". Assessment without back-up resources to encourage change with specific helpful actions and offerings is pernicious for teacher self-esteem. Particularly, teachers as professionals may appreciate seeing researches and other professional publications which document how effective change can be in promoting the children's success. For example, Hollifield et al., (1989) put out a set of position papers on how cooperative group learning and the concept of "jigsaw classroom" learning has been implemented in some schools. The Bredekamp NAEYC publication (1986) should be made available for every teacher who wants to launch onto the long road toward developmental appropriateness of program. A subscription to Young Children, the journal of the National Association for the Education of Young Children, would be an excellent help for kindergarten teachers. Many practitioners (as well as researchers) contribute to the journal, which can help provide a community of supportive professionals from all over the USA for teachers who are trying to implement changes toward developmentally appropriate practices, but do not find that their local community is as understanding of or supportive of such changes as national organizations, such as NAEYC.

Tests to Monitor Children's Progress in Kindergarten

The third assessment domain for decision making has to do with what tests are used to monitor children's progress. Norm referenced tests may be inadequate to help a teacher assess how far she or he has helped a particular youngster come from the baseline entry skills that an individual child, rather than the total group of children, demonstrated on entry to kindergarten. Other kinds of assessments, such as case notes, event sampling, and a portfolio of materials produced by the child, may be far more valuable to help a teacher decide how the child is progressing toward the classroom goals or toward teacher-determined goals in kindergarten for this particular child.

When necessary, the teacher should have available access to psychometric test professionals. If the teacher is particularly worried about a perceptual problem, or a lack of progress with language skills, or perhaps has a concern about global intelligence, then the school needs to be able to call on someone who can administer the Illinois Test of Psycholingustic Abilities, or the Stanford-Binet or the Wisc-R or the Bender-Gestalt test, in order to be able to give the teacher a clearer picture of some of the difficulties and strengths of the particular child for whom there is special concern. Again, the problem arises as to what disposition will be made of these testing results. If automatic retention decisions are made, then the testing is not being used for full value. Formative evaluation should be the motto for testing. What can the tests tell us that will help us program better for each child?

Indeed, informal observation while engaged in one-on-one tutorials with the children may prove the most powerful tool for teacher asessment of child progress and for teacher decision making about promotion. In a program in Baltimore for at-risk youngsters, six tutors were provided in one school for grades K-3. At least every 8 weeks, the teachers assess student progress through the program and decide who is to receive tutoring, or who is to change reading group, or they identify needs for other types of assessments, such as family interventions or vision/hearing screening.

> Reading teachers at every grade level begin the reading time by reading children's literature to students and engaging them in a discussion of the story designed to enhance the students' understanding of the story, listening and speaking vocabulary, and knowledge of story structure. In kindergarten and first grade, the program emphasizes development of basic languge skills with the use of Story Telling and Retelling (STAR), which provides an integrated program for involving the students in listening to, retelling, and dramatizing children's literature. Big books as well as oral and written composing activities allow students to develop concepts of print as they also develop knowledge of story structure. Peabody Language Development Kits are used to further develop receptive and expressive language. Beginning reading is introduced when the students are ready, either in kindergaten or at the beginning of first grade. In this program, letters and sounds are introduced in an active, engaging series of activities that begins with oral language and moves

> into written symbols. Once letter sounds are taught, they are read in words used in stories. The K-1 reading program uses a series of phonetically regular but interesting minibooks and emphasizes repeated oral reading to partners as well as to the teacher, instruction in story structure and specific comprehension skills, and integration of reading and writing. (Slavin et. al. 1990, p.259)

This program, Success for All, is designed, through use of constant formative evaluation and vigorous use of tutorials, to bring inner city children up to grade level by third grade. Implementation begins in kindergarten. The program demonstrates an ideal use of assessments. They are used to help teachers more adeptly help children, rather than used for punitive decisions or pigeonholing decisions. Measures that are used in the program (aside from the school's routine use of the Boehm and of the California Achievement Test) are: 1. Test of Language Development (TOLD). This is an individually administered Picture Vocabulary and Sentence Imitation Scale for assessment of receptive and expressive language concepts of preschool and kindergarten students. 2. Merrill Language Screening Test. Individually administered, the comprehension scale from the Merrill was used to assess kindergarten children's ability to understand complex story structure. 3. Four individually administered reading scales were chosen from nationally standardized reading batteries to assess a full range of reading skills: word attack (Woodcock Word Attack), recognition of letters and key sight words (Woodcock Letter-Word), oral reading fluency (Durrell Oral Reading), and comprehension (Durrell Oral and Silent Readings). Success for All kindergarten students significantly outscored their controls. Prevention programs can succeed, *if* assessments are viewed as tools to enhance teaching and fine tune intervention and support services, and not used simply to determine retention or predict failure. Incidentally, such a program is expensive. This effort cost about $1,000 per child but may dramatically reduce later costs of grade retention or special education.

The issue of assessment of young children is so important now, that there is even a conference to be held at High/Scope Educational Research Foundation in October 1990, entitled "Beyond testing: New approaches to the educational assessments of children 3 to 8 years old." The State of Georgia has recently developed a New Kindergarten Assessment Plan. Representatives of this effort plus other school representatives will discuss varieties of observation and assessment tenchniques, for suburban children, minority children, and other groups. Missouri will be represented by their Project Construct - the Missouri Department of Education's effort to develop a comprehensive approach to the educational assessment of young children.

Changes in Teacher Education and School Practices

Outreach to Parents and the Community

Changing kindergarten classroom practices, changing the organization of the classroom so that centers and activity areas are available rather than conventional rows of seats, requires that schools reach out to parents (Honig, 1979). School boards, parents, and influential community people of good will toward ideas for improving the learning careers of young children are necessary as supporters of a school or a school system's efforts to improve kindergarten processes and practices.

Reach-out to community persons will be especially important if improvements will require changes in certification requirements. For example, training provided for teachers of older elementary school children may not have included any early childhood education practicum or internship work or any in-depth acquaintance with the literature on developmentally appropriate practices and curricula for young children. If a school system, therefore, decides to introduce an N through 3 certification for early childhood educators, then a lot of careful documentation will be needed to point out the efficacy and predictive power of developmentally appropriate practices as they have been found to impact on later school adjustments and achievements.

Reach-out will be crucial to institutions of higher education in the state. If teachers are to be prepared to teach N through 3 as specialists, then Colleges of Education must be involved in dialogues about the changeover. Discussions need to center about what resources will be needed to provide relevant internships. Perhaps the local University already has child development courses available, but in a Department or College that addresses Child and Family Studies. The costs of changeover to an N-3 certification then could be much lessened for the state if education students were encouraged and/or required to take cross-listed courses in departments that already have such expertise and do offer child development and early childhood education preparation. Particularly, education majors with this early childhood education/child development focus will have to be free to choose more electives than many of them currently are allowed in their programs (Davis, 1989).

The importance of internships has always been a strong point of Colleges of Education. In order to produce a cadre of teachers thoroughly trained to teach N -3, however, new kinds of internship sites may have to be developed. University preschool laboratories may be an excellent starting point for education students to begin working with master teachers who have already been trained in developmentally appropriate practices with preschool age children.

At such preschools, N-3 teachers-in-training learn many skills, including how to set up activity centers, how to use reflective listening, and how to transition smoothly from one activity to another. On some campuses, Deans may want to add more exemplary nursery and kindergarten classes to an already existing campus elementary school, in order to accommodate education students who will need such sites for practica for their early childhood education training. Some courses that are already extant in the curricula may need expansion. For example, courses in ethnic sensitivity may already exist. But studying the at-risk child from ethnically and culturally diverse populations may require adding more material that covers the early childhood years.

Working with the parents of young children at risk may necessarily entail providing more course work in family dynamics, in PET skills, in understanding the effects of crises (such as chronic alcoholism, divorce, or parental mental illness) on the lives of young children.

Even in communities with more homogeneous populations or with well-educated parents, there need to be dialogues to help concerned parents understand changes that may be implemented in order to run developmentally appropriate programs. Some parents will look askance at invented spelling. Some will think the classroom activity centers seem too noisy. Katz and colleagues (1987) in their dialogues with principals, kindergarten teachers, and parents in one midwest community, prior to implementation of improved programming, noted that realism means that not all teachers, not all parents will be comfortable or happy with changes toward more developmentally appropriate practices. Some will see children's freedom at some times to choose activity areas of preference, children's freedom to choose lengthier or shorter times to engage in different activities, as vitiating their ideas of what education is all about. Some people believe that adults always must be in charge, and be giving directions to children or chaos will result. Some feel that adults need to decide overwhelmingly during a day what work children should be engaged in. Katz and her colleagues (1987) strongly support reach-out to the community when change is desired:

> It is recommended that state and local library, media, and other pertinent resources be mobilized to help improve public understanding of the role of the kindergarten. Such an effort could highlight contemporary research and insights into the nature of learning in the early years, the role of play, the potential long-term consequences of early formal instruction in reading for various children, the role of the home, and so forth. Furthermore, some effort to help parents understand that in communities in which there is any diversity at all, a school district cannot satisfy the demands, needs, and wishes of all parents equally; and that, while diverse views can and must be expressed and attended to, action requires decisions that only rarely can be equally acceptable to everyone. (p.51)

What Kinds of Learning Do Kindergarten Children Need?

Different kinds of learning need to be encouraged in kindergarten. In many kindergarten classrooms, there is a great disparity between what the child enters knowing, and what are considered minimal school requirements for prereading skills and knowledge in order for promotion to first grade to occur. Some teachers believe that learning should focus on basic knowledge categories and concepts - such as colors, shapes, sizes, and names for members of different classes, such as food, transportation and animals. Teachers often do a thorough job also of teaching children about holidays and the symbols, activities, and personnel appropriate to Halloween, or Thanksgiving, or Mother's Day or Arbor Day. Indeed, if one looks at the book and play equipment and toys available at tables at local and national educational or child development meetings, the vast majority of such materials are geared toward the learning of basic concepts. Of course, other activities and materials in kindergarten are designed to teach sound/letter correspondences, initial letter recognition, rote alphabet and rote counting and the like.

Motivation Skills

Yet the skills that will ensure school success are more subtle. Some are motivational skills: Wanting to learn, patience to stick with a lengthy task of discovery, persistence at working through an activity - even if some adults call that activity "play".

We have already discussed the teacher's role in promoting a child's listening skills and positive attitudes toward cooperation with adult suggestions. Thus, cooperation and mediation skills are important as goals for learning. Indeed, Swan & Stavros report (1973) that in Title 20 schools in New Orleans, serving black, low-income families, those parents who showed genuine interest in their children, were appreciative of their children's help in the household, who read regularly with their children and talked lots at the dinner table had children who were cooperative and self-motivated learners in the kindergarten classroom, as assessed by their teachers, who were blind to the parental or household characteristics of the children whom they had rated as superb early learners.

Children often need to comply with logistical classroom requirements. Suppose a given wood-working table activity or water table activity can only accommodate four children, who need to take their wooden activity tags and hang them on a special board signalling that they are using this particular activity center at this time. No more children may play at this area for the while. Children for whom the curriculum offers little help in learning cooperation skills will get into difficulties, in such situations,and perhaps in others. Katz (1988) calls some of these child variables "dispositions".

> Dispositions are a very different type of learning from skills and knowledge. They can be thought of as habits of mind, tendencies to respond to situations in certain ways. Curiosity is a disposition. It 's not skills, and it's not a piece of knowledge. It's a tendency to respond to your experience in a certain way. Friendliness is a disposition. Unfriendliness is a disposition. Creativity is perhaps a set of dispositions. Being bossy or a bully are dispositions. Not all dispositions are desirable. (p.30)

Reasoning and Thinking Skills

Aside from teaching basic concepts, and also promoting positive dispositions to create a cooperative classroom climate, that values the children's "Caring Quotient" - or CQ as Kobak (1979) calls it, as much as their IQ, teachers will need to promote children's reasoning and thinking skills. Reasoning, analyzing, drawing inferences, and making deductions are critical skills for learning disparate subject matter and succeeding at higher academic levels. Memorization or rote repetition in order to pass tests of true-false or multiple choice no longer suffice to ensure success at higher learning levels. Katz (1988b) makes the distinction between "academic goals" and "intellectual goals" for children:

> Academic rigor refers to strong emphasis on completion of school-like tasks, exercises, grade-level achievement, grades and test scores, following instructions and meeting requirements, conforming to procedures and conduct necessary to succeed in the academy and to fulfill its institutional requirements. Academic also suggests being out of touch and abstract. In contrast, intellectual rigor refers to characteristics of the life of the mind and its earnest quest for understanding, insight, knowledge, truth, solving intellectual puzzles and the like. (p.31)

Syllogistic reasoning skills, if - then logical analyses, are difficult and challenging skills for young children to learn. When the children are just on the edge of moving into the concrete operational stage with its advanced powers of understanding and manipulating hierarchical classifications, and linear verbal logic, and the like, then reasoning skills are particularly challenging for the early childhood educator to promote. Yet they are crucial as goals. Often, discipline methods chosen by a teacher will display non-logical consequences that further confuse the young child. A teacher may make a child copy "I will be good" 100 times in a notebook or on a board. What is the syllogistic connection between the child's previous peccadillo and the subsequent behavioral actions? Very little. More examples of absurd or logical classroom contingencies need to be carefully thought through by educators in the light of how they provide good examples or counter examples of good reasoning.

Socratic questions are an excellent tool for teachers to use to figure out the present reasoning abilities of young children

(Wittmer & Honig, 1991).

- How could we get from A to Z?
- How could you figure out whether the same or a different weight in this other boat made of waxed paper rather than aluminum will sink your toy ship?
- Why do you suppose that the man's hat in this picture is rolling in the gutter? What could have happened?
- Can you think of some ways to get across a small stream in the woods without getting your new sneakers wet?
- How can we comfort Jose? He is feeling so upset because he dropped his project and it got squashed on the floor.

Such reasoning problems are tested in the Stanford-Binet Intelligence Scales by the presentation of incongruous pictures, such as a man trying to saw while holding his saw upside down, or a dog running to chase after a rabbit, but in the opposite direction from that taken by the rabbit. Children need opportunities to find hidden objects in pictures and to search for incongruities. In the Stanford-Binet test, there are further puzzles which a child is required to analyze for foolishness or absurdity. For example, the test asks:" Bill Jones' feet are so big that he has to pull his trousers on over his head. Why is that foolish?" Kindergarten children need a large dose of such critical thinking problems. They force a youngster to look for sequence misalignment, for absurdity, for incongruity. An activity could be as simple as having two puppets talk with one of them saying "sillies" and the child helping his own puppet to correct the sillies such as "Brush the clean" which needs to be transformed to "Clean the brush".

Humor can be of help for the kindergarten teacher. Five to seven year olds love to experiment with word deformations. Daniel drew me a picture and proudly announced "Here is a gorp that loves to neap!" The children love knock-knock jokes and small non-sequiturs and the beginnings of verbal substitutions that are silly or depend on homophone substitutions. See Honig's (1988, May) review of research into the development of humor in children for suggestions of materials that can promote positive classroom climate as well as thinking skills through the use of humor.

The importance of higher-order thinking operation in the design of curricula has been emphasized by Wasserman (1990).

> A well-designed investigative play activity should lead to children's investigations of big ideas...This requires [teacher] familiarity with those mental processes that call for high-order cognitive involvement: comparing, observing, classifying, summarizing, interpreting data, examining assumptions, suggesting hypotheses, applying new principles to new situations, designing projects and investigations, making decisions, evaluating and judging, creating and inventing. (pp.100-101)

Wasserman recommends a system she calls "play-debrief-replay". The teacher gets children together after play activities. They need to think about what happened, how it went; where they hit snags; how they tried to figure out solutions to problems; what they have learned so far. From such sessions plus their own reflective observations of the children, teachers can gather data about children's "learning difficulties, and then use those data to make informed diagnoses about how best to help those children" (p.103).

The metacognitive work implicated in a teacher's conceptualizing how to take a new idea and weave it into classroom practice is difficult and exhilarating. Such professionally excellent teachers are living out the idea of "teaching as reflection-in-action" (p.103), to use Wasserman's term. She calls teachers "reflective practitioners who operate play-debrief-replay programs". Her analysis of the job of the excellent teacher confirms the high degree of professional skill needed. It also emphasizes the urgent need for revamping teacher training programs to help neophyte teachers become more adept at such sophisticated professionalism.

Teacher Beliefs and Implementing Change

How easy or difficult will it be to change teacher training courses, offerings, internships and content of curriculum in order to educate more teachers who are prepared to work in and to set up developmentally appropriate classrooms for kindergarten children? One of the variables that research has found correlated with kindergarten teacher practices is teacher beliefs about children. In theoretical terms, the beliefs that non-psychologist adults hold about human behaviors are called "naive theories". Heider has written extensively about the naive theories of human psychology and development that characterize lay persons. For example, many teachers believe that motivation is a crucial aspect of child functioning. If one child has low level ability but does not seem to try and gets poor grades or turns in unsatisfactory work, a teacher may label that child lazy and say he has a poor attitude. The teacher may treat that child very differently from another child who has low ability and poor skills, but seems to try hard, listens to teacher instructions, and seems always to be working when the teacher asks the children to carry out some task, project or lesson plan. Thus, teacher beliefs about how hard a child is trying will influence judgment about child character, competence, and eventual achievement levels.

In Smith and Shepard's(1988) inquiry into teacher beliefs about how children learn and causal mechanisms for school success, they found that teacher beliefs ranged on a continuum. Of 44 kindergarten teachers in a district, 40 from six schools were interviewed using a semistructured, clinical interview format. A series of indirect and direct questions helped the investigators to find out about teacher beliefs as to why particular children had not been ready for kindergarten, to speculate on the reasons for their lack of preparation, and to describe in concrete terms a child's difficulties, such as not being able to follow a series of directions. Schools provided documents on their retention policies. Parents were selectively interviewed. From the case studies, teacher beliefs were found to lie along a dimension from nativism (children are a product of physiological processes and these mechanisms determine readiness) to interactionism (within broad limits, children's readiness to succeed in kindergarten is a function of their experience, the learning program, and their environment). Spurts and discontinuities were expected by those who believed that teachers could make a difference and help close the gap for those who entered less prepared to succeed.

What was fascinating about these data was the lawfulness with which teacher beliefs correlated with the proportion of kindergarten children retained in a particular school. There was a statistically significant difference between retention rates and the belief system (nativist vs. non-nativist) of teachers. The nativist teachers believed that time alone was a remedy for children with inadequate readiness and they were, therefore, more likely to recommend retention. Schools also differed. Schools with high-retention rates for kindergarten were characterized by more bureaucratization and a greater degree of grade segregation. They held more rigid ideas about what the correct content of a grade should be. Teachers sent back a grade any child whom they perceived as not having the background for their class. In schools with low retention rates, teachers in the different grades believed in working cooperatively together. They consulted with one another. They arranged for any child who needed to, to be able to spend some time of the day in one grade and another part of the day in another grade. They felt more flexible about what constitutes grade level instruction. One kindergarten teacher's beliefs about such flexibility is instructive:

> We would like them to know all their letters and sounds when they go out of here. But there is generally a group that goes out of here who needs further help with those, and the first-grade teachers are very comfortable with that. Our school's philosophy is that you take the children where you find them and move them to the extent of their abilities. (p.328)

Teachers in another low-retention rate school also held flexible beliefs:

> Yes, we would like them to know their letters by the end of kindergarten, but if they don't, the first-grade teacher can accommodate. If the child is not reading until the end of second grade, we don't get disturbed, as long as he is working and interested and growing. (pp.328-329)

These teachers did not hold beliefs such as "This child does not belong in this grade" or "This child is not capable of work in this class". These teachers accepted the possibility of "spiraling, sudden reorganizations, intuitive leaps to understanding, false starts, regressions, and other unpredictable paths to learning, all of which must be facilitated by flexible teachers in flexible school organizations"(p.329). As a consequence of their beliefs, these teachers left back few kindergarten pupils.

Below are some typical statements of beliefs of teachers in the four major belief categories that this research induced from the audiotapes of interviews:

The words of teachers provide the best evidence for the diversity of beliefs when they answer the question, "Is there anything the teacher can do about [a particular] kindergartner who is not prepared for first grade?"

A Nativist:

> He's young. He's a boy and very low in a lot of those areas like following directions, attending, and things like that. I just feel he needs another year to get him ready for first grade. Just to give him a big start. If he doesn't, school's going to be a struggle for him. If he's struggling now in kindergarten what will it ever be like in first and second grade? When I present that to parents, I just say they need another year to grow, a catch-up time. Then if the parents agree, we take the pressure off, probably by giving him different expectations than I will give the other kids. I'm worried about parents thinking they can push them ahead by working with them. If they're not getting it from what we're teaching, it's probably because they're not ready to do it; and all this work is going to frustrate parents terribly and it's not going to really help the child a lot and it may frustrate her terribly.

A Remediationist:

> I think we as educators have to give them the most benefit of the doubt or do something different and help that child. And maybe the way we taught it is not correct. Maybe we ought to change our style or drill or do something different and help that child. And I think if you marked them and said, "If he doesn't get it now, he'll never get it. We'll try for another year of maturity, maybe he'll get it next

year," I think you give up.

A Diagnostic-Prescriptive Teacher:

> You always have children who can handle everything else but have problems with visual motor coordination, and those children probably are going to have those problems so that that wouldn't be any reason for retention. We have our academic assistance program, and children that are showing these problems work there. If a child absolutely couldn't listen, I'd certainly try very hard to find out what the problem is before wanting to keep him in kindergarten another year. The reason he can't attend may be because he has an auditory problem. If he has this block or a problem, then he's got to learn to work around that to compensate for it, and that's what we'll try to give him are ways to compensate.

An Interactionist:

> With the variety of materials we have in experiential education, the child will plug in right where he is comfortable. And you can see right away by the way the child works with materials the kinds of experiences he is going to need that year. Every child can be successful in this classroom, and I'm not sure that's true of a very paper-oriented, teacher-directed kindergarten where each child is making the same clown face or cat. When there is a wide range of kids, you've got to offer a wide range of experiences. (p.330-331)

Thus, we can see that the belief systems of teacher trainees and, doubtless, of teachers of teacher-trainees, may have a powerful impact on the content of educational course work and on how the philosophy of education is shaped with the student teacher. Individual teacher beliefs, of course, interweave with the belief systems of parents, principals and colleagues in other classrooms. Yet, if the predominant climate of belief is that the child will grow in a climate of careful preparation of interesting opportunities to learn, in a climate of genuine positive regard, and in a climate where modeling of prosocial and language-pleasure experiences is palpable, the chances that a developmentally appropriate curriculum will be carried out optimally is certainly greater.

Conclusions

If optimization of the kindergarten process, experience and organization is to be carried out in North Carolina, then not only must the variables that have been discussed in this paper be considered carefully, and the suggestions for course content for teacher training and for kindergarten classrooms be considered, but superintendents, principals, Boards of Education, and Colleges of Education will have to think candidly about their belief systems about how children learn, how teachers do or do not comfortably work together, how children's growth is supported, or whether time is expected to take over and produce readiness for learning.

Indeed, it is hard to see how genuine implementation toward developmentally appropriate practices can be assured unless a thorough openness to beliefs as well as to honest appraisal of current practices is undertaken. Such an appraisal does not imply judgmental criticism. Adults can differ honestly in their beliefs and in their values. However, if the goal is to support the learning careers of young children, many of whom are at risk, some of whom will get through and some of whom may well be understimulated, then honest awareness of current practices and beliefs, structures and organizations of classrooms and schools needs to be undertaken. The purpose is not to say who has been a bad teacher or what has been a bad practice. The purpose is to move toward change so that children learn in a climate more conducive for their personal growth. If the focus can be kept on what is best for each individual little learner, what will help promote real intellectual zest for each child, then apportioning blame or denigration of persons or programs currently in operation will be seen as beside the point. This viewpoint is crucial. Change becomes far more difficult if people feel threatened and defensive. When they become aware of what can be done and how change can be implemented so that children flourish, adults may be far more willing to learn and try new ways of interacting with and supporting children's learning. They will venture new ways of working in cooperation with colleagues in other classrooms in order to implement developmentally appropriate kindergarten practices.

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